UNITED STATES DEPARTMENT OF AGRICULTURE
FOREST SERVICE

Forest Pest Management
P.O. Box 5895, Asheville, N. C. 28803

REPLY TO: 5200 Forest Insect and Disease Control June 25, 1975

SUBJECT: Insect and Disease Evaluation - Francis Marion Seed Orchard

TO: Supervisor, Francis Marion and Sumter NF
Attention: O. D. Smith

An inspection of the Francis Marion Seed Orchard for insect problems was made on May 20, 1975 by personnel from the Forest Pest Management Group. The primary objective was to determine the present status of the Nantucket pine tip moth, Rhyacionia frustrana Comstock, and pine tortoise scale, Toumeyella numismaticum (P. & McD.) in the susceptible hosts, i.e., the Georgia shortleaf and loblolly pine; and to check on the cone losses in the piedmont loblolly. No systematic sample was made for tip moth or tortoise scale at this time. A random check was made and no tip moth was found. The Georgia shortleaf still has a light infestation of tortoise scale.

Timing of spray application is extremely important in efforts to control scale insects. The spray must be applied during the crawler stage because once the "shell" has developed over the adult it is more resistant to pesticides.

A total of 277 second year cones were checked on 16 trees. Only nine infested cones were found. The insect causing the damage was probably Dioryctria amatella (Hulst.).

A disease evaluation of the orchard was made by Ed Cordell on May 22. During previous insect evaluations, trees showing terminal and lateral branch damage had been noted in the piedmont loblolly seed source. Three distinctive disease symptom types and damage were observed in the piedmont loblolly source. Several trees were displaying terminal defoliation and discoloration. Close examination of these terminals revealed the production of new needles and no evidence of insect or other biotic (fungus) activity. No fungus organisms were cultured from sample specimens in the laboratory. Consequently, the most probable cause(s) of this problem was surmised as physiological and/or environmental. This initial recovery also suggests the probability of total recovery within the next 2 years. A terminal weevil (Pissodes sp.) was associated with dead terminals in one of the piedmont loblolly ramets. The damage is done and control is neither feasible nor warranted for this insect at this time. The third type of symptoms and damage was much more consistent and widespread in the loblolly source. Symptoms included terminal and lateral branch mortality along with considerable pitch flow from affected tissues. Symptoms were typical of pitch canker and samples were collected for laboratory confirmation of the causal organism.

Positive isolations and identifications of two fungi, Pestalotia sp. and Fusarium lateritium f. sp. pini, were obtained from the branch samples.

Pestalotia sp. has been of concern only as a secondary parasite and has not presented a serious problem in the past. However, Fusarium lateritium f. sp. pini, the causal agent of pitch canker, may retard the growth or kill loblolly pine in the southeast. This fungus produces the typical reactions of resin flow, twig blight, and pitch-soaking of wood.

At the present, there are no effective applied chemical control measures to control this disease. No fruiting bodies have been found in nature and direct control measures can be put on a sound basis only when the means of spread is known. However, pruning of diseased and damaged terminal branches should be helpful in reducing the future impact of this disease to your seed orchard. When pruning, be sure to remove all visibly diseased terminals and lateral branches along with about 6 inches of healthy tissues.

The next planned visit to the seed orchard is during the week of July 14, 1975. At this time, insect evaluations will be made for tip moth, tortoise scale, and cone losses. A disease survey is planned for pitch canker in the piedmont loblolly seed source along with a general survey for the parasitic weed, Seymeria cassioides, which was found in one location in the orchard during the summer of 1974.

Several copies of literature concerning pitch canker on southern pines and the occurrence and descriptions of the seymeria parasitic weed in the southeast are enclosed as additional reference material for your files. Let us know if we can be of further assistance on these or any other seed orchard pest problems you may encounter.

Sincerely,

John H. Thompson

JOHN H. THOMPSON
Field Office Supervisor

Enclosures

cc: Yarnell